

CLAIMS

What is claimed is:

1. A method comprising:

searching for a communication channel by activating a receiver having a radio
 5 frequency (RF) module and a baseband module for storing a portion of received signals within
 a first time period, de-activating said RF module of said receiver, and background processing
 said portion of said received signals with a variable clock rate within a second time period.

2. The method according to claim 1 wherein said processing comprises processing spread
 spectrum signals.

10 3. The method according to claim 1 wherein said processing comprises processing Code
 Division Multiple Access (CDMA) information.

4. The method according to claim 1 wherein said processing comprises performing at
 least one of synchronizing pseudorandom noise (PN) offset of said portion of said received
 signals, searching for at least one neighboring communications cell and searching for at least
 15 one candidate communications cell.

5. The method according to claim 4 wherein said synchronizing comprises detecting a
 current pseudorandom noise (PN) offset of said portion of said received signals, and, if
 different from a previous PN offset, shifting to the current PN offset.

6. The method according to claim 1 wherein the searching is performed while continuing
 20 to receive a currently received communications carrier.

7. The method according to claim 1 and further comprising receiving said received
 signals in at least one wake period of a slotted mode.

8. The method according to claim 7 and further comprising reducing the power consumed
 during said at least one wake period after recording said portion of said received signals.

25 9. The method according to claim 1 wherein said processing is performed with a clock
 rate faster than a clock rate used for receiving said received signals online.

10. A receiver comprising:

a radio frequency (RF) module and a baseband module, said RF module being adapted
 for storing a portion of received signals; and

30 a processor having a variable clock, adapted to de-activate said RF module of said
 receiver, and to perform background processing of said portion of said received signals with a
 variable clock rate.

11. The receiver according to claim 10 wherein said RF modules comprise a memory device adapted for storing therein said portion of received signals, and said processor comprises a digital processing unit, wherein said memory device is adapted to input said portion of received signals to said digital processing unit.

5 12. The receiver according to claim 10 wherein said RF modules comprise a memory device adapted for storing therein said portion of received signals, and said processor comprises a rake receiver and search engine, wherein said memory device is adapted to input said portion of received signals to said rake receiver and search engine.

13. The receiver according to claim 11 and further comprising a sampling unit adapted to
10 receive said portion of the received signals and to input said portion of the received signals to said memory device.

14. The receiver according to claim 12 and further comprising a sampling unit adapted to receive said portion of the received signals and to input said portion of the received signals to said memory device.

15 15. A cellular communication system comprising:

a receiver comprising a radio frequency (RF) module and a baseband module, said RF module being adapted for storing a portion of received signals; and

a processor adapted to de-activate said RF module of said receiver and to process said portion of said received signals offline.

20 16. The cellular communication system according to claim 15 wherein said RF modules comprise a memory device adapted for storing therein said portion of received signals, and said processor comprises a digital processing unit, wherein said memory device is adapted to input said portion of received signals to said digital processing unit.

25 17. The cellular communication system according to claim 15 wherein said RF modules comprise a memory device adapted for storing therein said portion of received signals, and said processor comprises a rake receiver and search engine, wherein said memory device is adapted to input said portion of received signals to said rake receiver and search engine.

18. The cellular communication system according to claim 16 and further comprising a sampling unit adapted to receive said portion of the received signals and to input said portion of
30 the received signals to said memory device.

19. The cellular communication system according to claim 17 and further comprising a sampling unit adapted to receive said portion of the received signals and to input said portion of the received signals to said memory device.